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UNITED STATES DEPARTMENT OF AGRICULTURE
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THE INTERMEDIATE OUTLOOK FOR MEAT ANIMALS

Meat animals in future years will hold an increasingly important position in the agriculture of the United States. Projections for the period centering in 1960 indicate that their production will be large, and their prices, while not unusually high, will compare favorably with prices of other farm products. Meat animals will likely contribute a rising proportion of the total income to farmers.

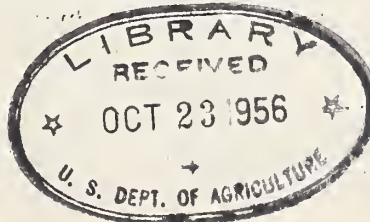
This intermediate-range outlook is based largely on the events of the last two or three years. These years have been a period of high employment and incomes and of a stable general price level, but of a gradually shrinking price and income position of United States agriculture. Emerging conditions that will continue to some degree and will shape the future position of meat animals include those in the following paragraphs.

High Employment and Incomes

Recent years have demonstrated the potential capacity of the United States economy for productive abundance and for growth. The labor force has increased at an average rate of slightly more than one percent per year over a decade and a half. Despite some shortening of the work week, technological progress has enabled output per worker to make an annual gain of around 2 percent. No diminution in these rates is in view. If the economy continues at high employment, the gross national product could increase by 1960 to 21 percent above 1954 (table 1). A $9\frac{1}{2}$ percent larger population is projected, the price level is assumed to be stable, and average disposable personal income per person is estimated at \$1,725 or 11 percent above 1954 income. ^{1/}

Although these projections are calculated for a generally high level of employment, short ups and downs in industrial activity and employment, common in the past, will without doubt again occur in the future. They will cause moderate departures in individual years from the average or norm presented in this analysis. While the likelihood of short-run aberrations is to be recognized, the analysis here does not allow for the possibility of a major recession or a war. If either should develop, the projections presented here would not be valid.

^{1/} Data in table 1 and these notes are taken from Rex Daly, "An Appraisal of the Long-Run Demand for Farm Products," (preliminary draft), to be published soon.



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Table 1.- Income, employment and price level, averages 1935-51,
annual 1952-55 and projection for 1960

| Item | Unit | Average | | 1952 | 1953 | 1954 | Prelim- inary 1955 | Pro- jected 1960 ^{1/} |
|--|-----------|-------------|-------------|-------|-------|-------|-----------------------|--------------------------------------|
| | | 1935- 39 | 1947- 51 | | | | | |
| Gross national product: | Bil. dol. | 84.5 | 272.0 | 345.2 | 364.5 | 360.5 | 387.0 | 435-440 |
| Personal disposable income----- | Bil. dol. | 66.3 | 195.4 | 236.7 | 250.4 | 254.8 | 268.6 | 310-312 |
| Per capita----- | Dol. | 507 | 1,291 | 1,487 | 1,547 | 1,547 | 1,626 | 1720-1730 |
| Consumer price index | 1947-49= | | | | | | | |
| | 100 | 59.8 | 102.8 | 113.5 | 114.4 | 114.8 | 114.6 | 114.4 |
| Wholesale prices, all commodities----- | 1947-49= | | | | | | | |
| | 100 | 52.4 | 103.6 | 111.6 | 110.1 | 110.3 | 110.7 | 110 |
| Population ^{2/} ----- | Mil. | 130.7 | 151.3 | 159.2 | 161.9 | 164.7 | 167.5 | 180.3 |
| Labor force ^{3/} ----- | Mil. | 54.3 | 63.8 | 66.6 | 67.4 | 67.8 | 68.7 | --- |
| Employment, including: | | | | | | | | |
| military----- | Mil. | 44.9 | 61.3 | 64.9 | 65.7 | 64.6 | 66.1 | --- |
| Unemployment----- | Mil. | 9.4 | 2.5 | 1.7 | 1.6 | 3.2 | 2.6 | --- |

^{1/} Projections based on assumed high employment are taken from Rex Daly, "An Appraisal of the Long-Run Demand for Farm Products," (preliminary draft), to be published soon.

^{2/} Total population of continental United States as of July 1, including Armed Forces overseas, adjusted for underenumeration.

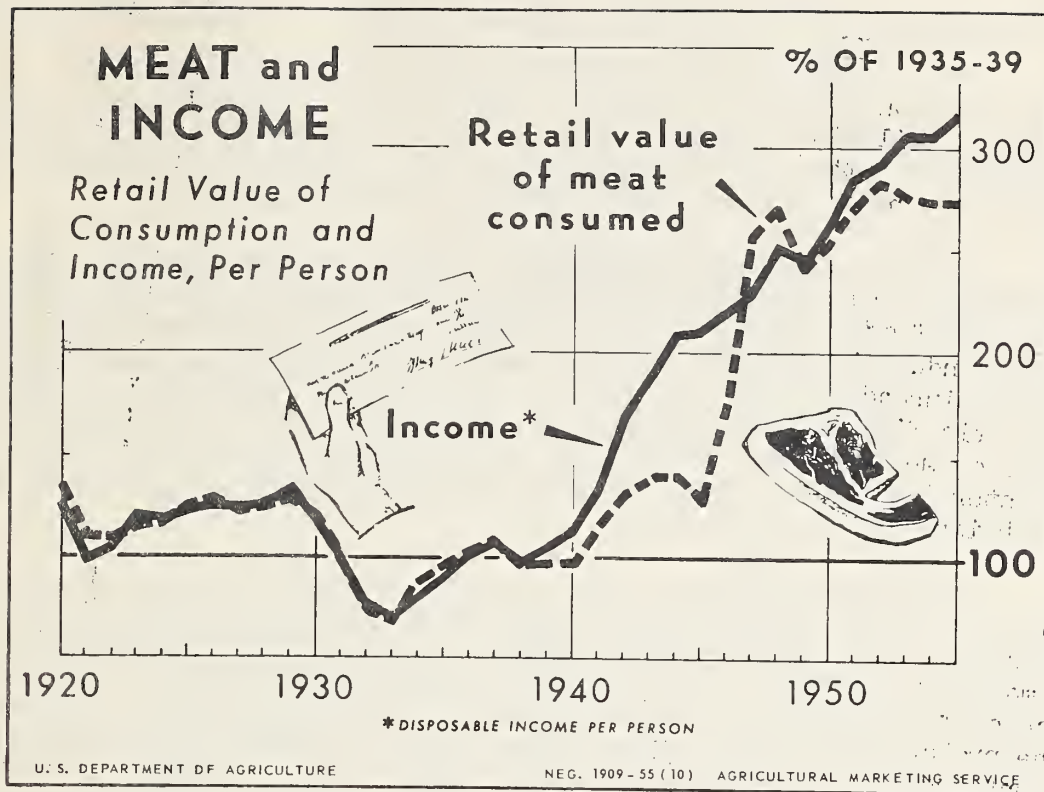
^{3/} Includes Armed Forces overseas.

Moderately High Proportion of Income to be Spent on Meats

A second condition assumed for 1960 is that demand for meat will increase but not as fast as incomes. The proportion of incomes spent on meat is considered to be moderately high but not quite as high as in 1954.

In the last two years the percent of incomes spent for meat has declined, as the retail value of meat consumed has failed to increase while incomes have risen (chart, page 3). The percentage expenditure, which reached 6.6 percent in 1947 and was down to 5.6 percent by 1951, is about 5.2 percent in 1955.

In this downtrend three forces have been at work: (1) The ending of the inflationary period that followed World War II. Demand for meat invariably receives a big temporary boost with general price inflation, as it did in 1947-48, but subsides thereafter. Transition from a rapidly rising to a stable price level accounts for much of the recent fluctuation in demand and price for meat animals and for farm products generally. (2) The increase in meat supply. Demand for meat is "inelastic"; it is not so inelastic as demand for many foods, yet is moderately so. Price changes are usually sharper than supply changes and a smaller total outlay is spent for a large than a small supply. Consequently, the increase in meat supplies to a 47-year high of 161 pounds consumed per person in 1955 reduced the percentage



expenditure for meat. (3) Over many years, the percentage of income spent for meat tends to decrease very slowly as the economy becomes more predominantly industrial, with more of all output in the industrial sector and a smaller part in agriculture. The drop in percentage expenditure has averaged 0.03 percent per year, or 0.1 percent every 3-1/3 years. This is slow compared with the rapid variations since 1946 but becomes significant over a number of years.

All the increase in incomes by 1960 projected in table 1 is a gain in "real" incomes, representing expanded output of goods and services and a higher standard of living. It embraces no price level inflation. Most studies of demand for meat, both those from budget studies and from time series analysis, report less enhancement of demand for meat from increases in real income than from the higher money incomes that accompany price inflation. In this difference, however, there are compensations. Every gain in "real" demand for meat is a gain of genuine significance. By contrast, inflationary increases in demand are often illusory and deceptive, for they are offset, at least in part, by rising costs of things bought. Moreover, one study presents evidence that demand derived from higher "real" income progressively strengthens over time, while that from price inflation is transitory and soon disappears. ^{2/} Hence, if the economy makes the substantial growth in productivity and in real incomes described in table 1, the livestock producer will derive substantial benefit.

^{2/} Elmer Working, "Demand for Meat." Institute of Meat Packing, University of Chicago, 1954. See also, Harold F. Breimyer, "Elmer Working: The Demand for Meat," Journal of Agricultural Economics Research, July 1955.

Meat Animals to Hold Favorable Position Relative to Other Farm Products

Meat ranks as one of the foods most preferred by consumers. As one for which consumers will increase their demand as their buying power increases, it contrasts with foods such as cereals which tend to be displaced at higher incomes. Under conditions of high employment and incomes, meat and meat animals enjoy a rather favorable relative position.

Certain other trends uphold the status of meat animals. Farm products produced for human food seem to have gained improved standing relative to those which are industrial raw materials. The latter have become increasingly subject to inroads from inorganic products, as farm-produced fibers are from synthetic fibers. Meat is free of such competition. Several of the byproducts of meat animals, such as hides, wool and inedible fats and greases, do enter into competition of this kind. But these, while definitely of high importance, are a rather small fraction dollarwise of the total value of meat animals.

A current tendency is for costs of the marketing and processing of farm products to increase. Meat animals could be less vulnerable to this trend than most other products because marketing costs absorb less of the retail price of meat than of any other food group except poultry and eggs. However, the probable course of marketing costs in meats is by no means clear. Recent increases in marketing costs for some foods represent the expense of new processing, packaging or servicing. Evidence is inconclusive as to whether these services add to, reduce, or leave unchanged the demand and price for the basic farm product. By and large, most meat is still sold in the same form, that of fresh cuts at retail, as it has been for generations. (Pre-packaging is not so much a new service as it is a new form of a customary service.) However, there have been increases in processing and canning of meats; and a small but growing quantity is currently being sold frozen. This processing adds to the overall marketing cost. But since little is known either as to the probable developments in meat merchandising, or as to the economic impact of added services, few reliable conclusions can be reached as to the significance of marketing trends to the economic position of meat animals the next 5 years.

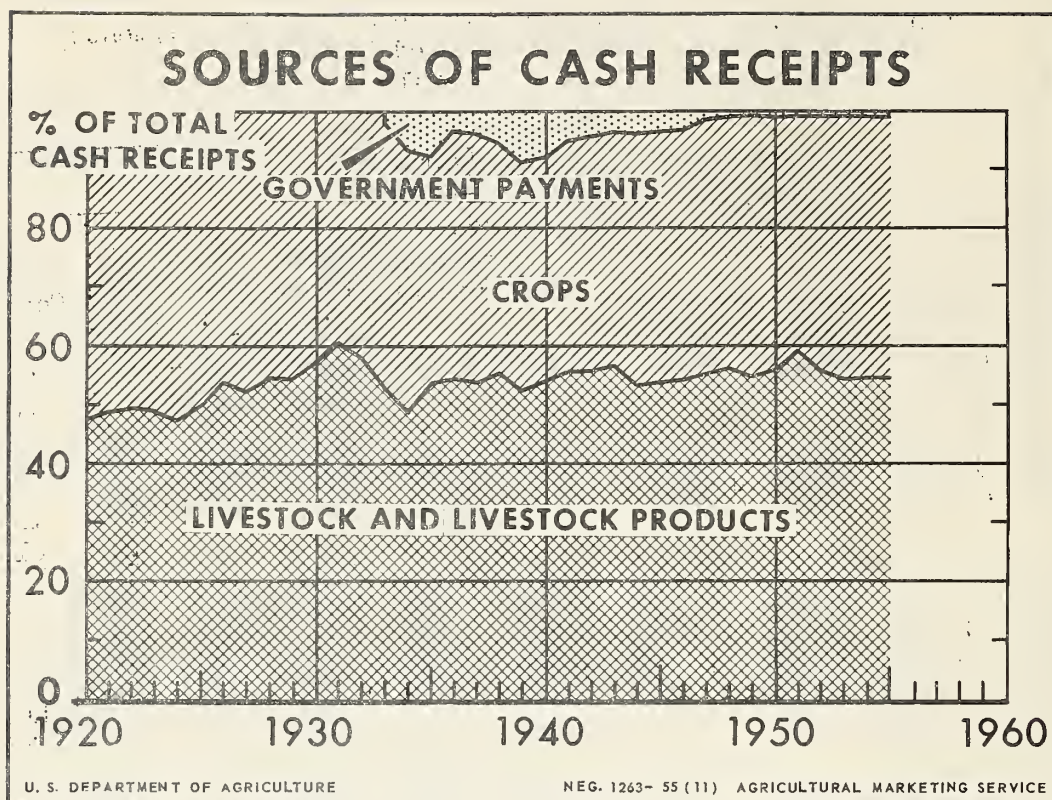
A similar inconclusiveness must be admitted with respect to foreign trade. Exports and imports of meat are now so small that the commodity receives only little direct effect from increases in foreign demand for United States farm products, or from decreases such as have occurred the last few years. But exports of animal fats -- lard, tallow and grease -- are large. They will be subject to any change in strength of foreign demand in years ahead.

That meat animals have been a rising source of farm income over many years is demonstrated by the chart on page 6 and the data in table 2. From 24 percent of cash receipts derived from cattle, sheep and hogs in 1920-24, the percentage has risen to around 30 percent in postwar years. This uptrend may well continue in years ahead.

Table 2.- Cash receipts from farm marketings and government payments, with percentage distribution, United States, selected 5-year averages and annual 1952-54

| Year | Receipts from | | | | | | | | | |
|---|---------------|----------------------------------|-------|---------|--------|-------|---------|-------|--------|------------|
| | Total | Livestock and livestock products | | | | | | | | |
| | cash | | | | | | | | | |
| | receipts | | | | | Meat | animals | | | Government |
| | and | | | | | | | | | pay- |
| | Government | Total | Dairy | Poultry | | | | | All | ments |
| | payments | 1/ | prod- | and | | | | | crops | |
| | | | ucts | eggs | Total | Hogs | Cattle | Sheep | | |
| | | | | | | | and | and | | |
| | | | | | | | calves | lambs | | |
| | | | | | | | | | | |
| | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. |
| | dol. | dol. | dol. | dol. | dol. | dol. | dol. | dol. | dol. | dol. |
| Average:: | | | | | | | | | | |
| 1920-24: | 9,801 | 4,735 | 1,346 | 913 | 2,343 | 1,071 | 1,121 | 151 | 5,066 | 0 |
| 1925-29: | 10,923 | 5,797 | 1,672 | 1,092 | 2,888 | 1,295 | 1,382 | 211 | 5,126 | 0 |
| 1930-34: | 6,490 | 3,593 | 1,204 | 687 | 1,615 | 680 | 811 | 124 | 2,782 | 115 |
| 1935-39: | 8,473 | 4,577 | 1,410 | 811 | 2,196 | 856 | 1,174 | 166 | 3,417 | 479 |
| 1947-51: | 30,084 | 16,954 | 4,024 | 3,137 | 9,517 | 3,559 | 5,556 | 402 | 12,865 | 265 |
| 1952 | 32,977 | 18,445 | 4,566 | 3,453 | 10,153 | 3,512 | 6,251 | 390 | 14,257 | 275 |
| 1953 | 31,457 | 17,209 | 4,373 | 3,756 | 8,806 | 3,598 | 4,894 | 314 | 14,035 | 213 |
| 1954 | 30,460 | 16,688 | 4,131 | 3,194 | 9,087 | 3,650 | 5,113 | 324 | 13,515 | 257 |
| Percentage of total receipts and payments | | | | | | | | | | |
| | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. | Pct. |
| Average:: | | | | | | | | | | |
| 1920-24: | 100.0 | 48.3 | 13.7 | 9.3 | 23.9 | 10.9 | 11.4 | 1.6 | 51.7 | 0 |
| 1925-29: | 100.0 | 53.1 | 15.3 | 10.0 | 26.5 | 11.9 | 12.7 | 1.9 | 46.9 | 0 |
| 1930-34: | 100.0 | 55.3 | 18.5 | 10.5 | 24.8 | 10.4 | 12.5 | 1.9 | 42.9 | 1.8 |
| 1935-39: | 100.0 | 54.0 | 16.6 | 9.6 | 25.9 | 10.1 | 13.8 | 1.9 | 40.3 | 5.7 |
| 1947-51: | 100.0 | 56.3 | 13.4 | 10.4 | 31.6 | 11.8 | 18.5 | 1.3 | 42.8 | .9 |
| 1952 | 100.0 | 55.9 | 13.8 | 10.5 | 30.8 | 10.6 | 19.0 | 1.2 | 43.2 | .9 |
| 1953 | 100.0 | 54.7 | 13.9 | 11.9 | 28.0 | 11.4 | 15.6 | 1.0 | 44.6 | .7 |
| 1954 | 100.0 | 54.8 | 13.6 | 10.5 | 29.8 | 12.0 | 16.8 | 1.0 | 44.4 | .8 |

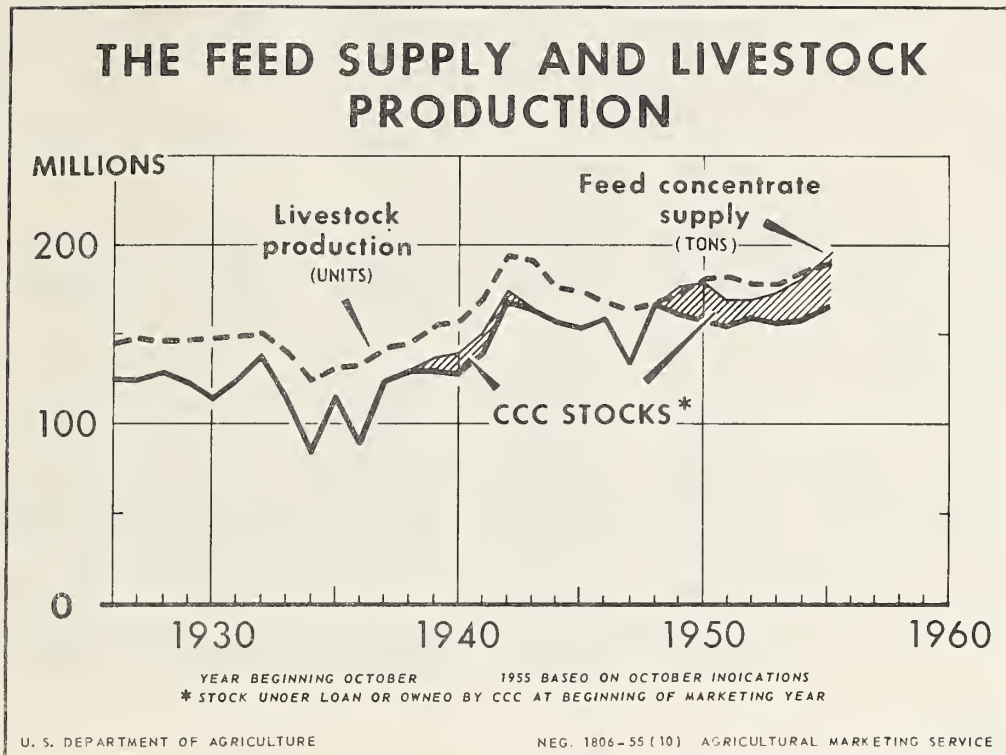
1/ Includes wool, horses, mules, mohair, honey, beeswax, and bees, not itemized.



Large Supplies of Feed

Increasing production of feed, price support policies that direct more of it into consumption and less into storage, and lower feed prices have underlain the increase in livestock production the last few years.

Technological progress in production of farm crops proceeds apace. Yields per acre have trended gradually upward and probably will average a little higher in 1958-62 than now. Acreages to be devoted to production of feed will be subject to any changes in farm policy, and restrictions on acreages would naturally reduce annual production of those crops below that otherwise to be expected. But it appears that total supplies of feed concentrates will continue large for a number of years. Under present agricultural programs, restrictions probably will be necessary on cotton and wheat acreages for some time to come. These would tend to maintain feed grain acreages. In addition, the present large reserves of feed grains -- about 25 million tons over normal working stocks -- would be available to meet a feed deficit in a year of short crop or unusually heavy feed requirements. With normal growing seasons it is unlikely that these reserves would be entirely eliminated over the next few years. Part will remain for the 1958-62 period. Supplies of feed in prospect for 1958-62 thus seem likely to be fully adequate to support a high volume of livestock production.



Technological Improvements in Livestock Production

Research attention to livestock production has long been directed toward increasing output per head, or in reducing requirements for labor. Signal successes have been achieved. ^{3/} Until recently, less effort was devoted to increasing the efficiency of converting feed to liveweight gain. Now, however, this area of research is less neglected. New feed supplements such as antibiotics for hogs and stilbestrol for steers are only the most spectacular of new technological advances. Continuation of achievement in research will further support expansion of the livestock industry in future years.

Prospective Production of Feed Grains

Prospective production of feed grains in the next 3 to 7 years will depend significantly on the extent to which recent shifts in feed grain acreages that accompanied diversions of wheat and cotton are continued. Corn acreage has remained relatively stable in recent years and unless a significantly different kind of acreage control program is initiated, an average of some 80 to 82 million acres of corn probably will continue to be planted. But the combined harvested acreage of oats, barley, and grain sorghums has increased $16\frac{1}{2}$ million acres above the pre-allotment level of 1952-53, and it is the use of this acreage which will determine, in large part, any substantial changes in feed grain production (table 3).

^{3/} See, for instance, "Changes in Farm Production and Efficiency," USDA, Agr. Res. Service, ARS 43-15, June 1955.

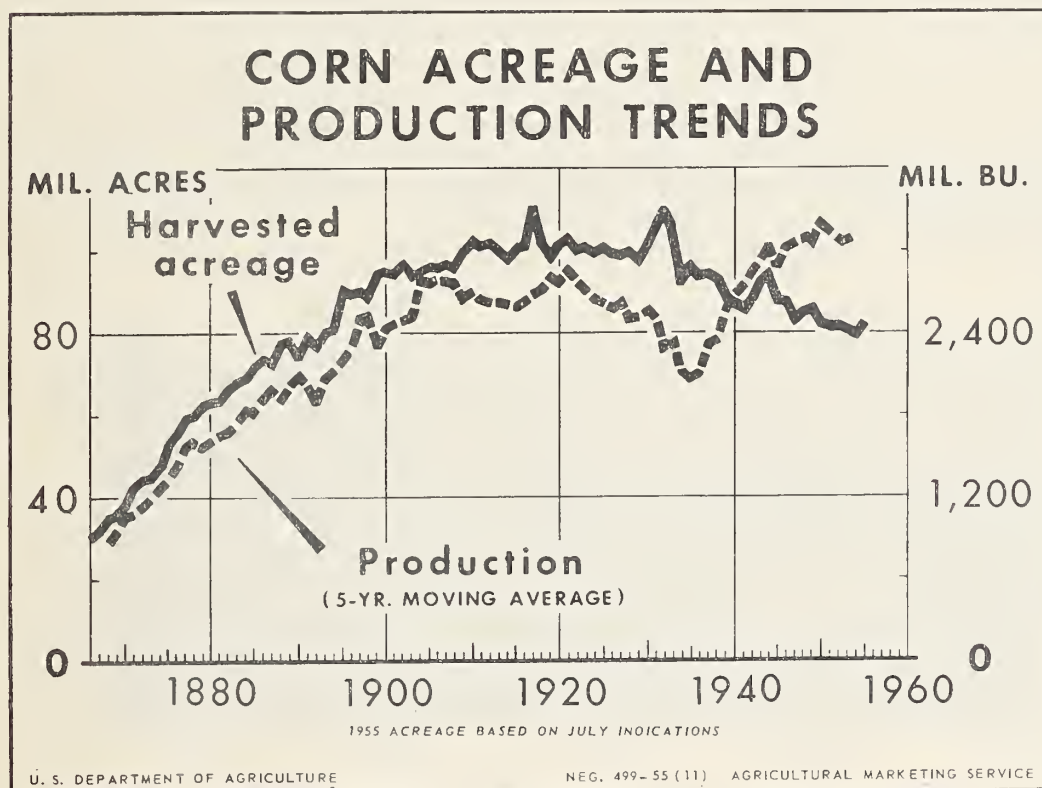
Table 3.- Feed grains and hay: Acreage, yield per acre, and production, averages 1935-51, annual 1952-55

| Item | Average | | 1952 | 1953 | 1954 | 1955 ^{1/} |
|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1935-39 | 1947-51 | | | | |
| | 1,000 acres | 1,000 acres | 1,000 acres | 1,000 acres | 1,000 acres | 1,000 acres |
| Acreage harvested: | | | | | | |
| Corn - - - - - | 92,699 | 83,164 | 81,099 | 80,608 | 79,875 | 80,765 |
| Oats - - - - - | 35,761 | 38,726 | 38,422 | 39,217 | 42,151 | 42,009 |
| Barley - - - - - | 10,817 | 10,664 | 8,244 | 8,586 | 12,994 | 14,099 |
| Sorghums for grain - | 4,353 | 7,642 | 5,061 | 6,150 | 10,764 | 13,228 |
| Total feed grains | 143,630 | 140,196 | 132,826 | 134,561 | 145,784 | 150,101 |
| Hay - - - - - | 67,940 | 73,351 | 74,454 | 73,996 | 72,770 | 74,667 |
| | <u>Bushels</u> | <u>Bushels</u> | <u>Bushels</u> | <u>Bushels</u> | <u>Bushels</u> | <u>Bushels</u> |
| Yield per acre harvested: | | | | | | |
| Corn - - - - - | 25.0 | 36.4 | 40.4 | 39.6 | 37.1 | 39.4 |
| Oats - - - - - | 29.1 | 34.2 | 32.8 | 30.8 | 35.6 | 38.9 |
| Barley - - - - - | 21.8 | 26.1 | 27.4 | 28.2 | 28.5 | 27.4 |
| Sorghums for grain | 12.6 | 19.8 | 16.4 | 17.8 | 19.0 | 17.1 |
| | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> |
| Hay - - - - - | 1.24 | 1.37 | 1.40 | 1.43 | 1.43 | 1.47 |
| | <u>1,000 bushels</u> | <u>1,000 bushels</u> | <u>1,000 bushels</u> | <u>1,000 bushels</u> | <u>1,000 bushels</u> | <u>1,000 bushels</u> |
| Production: | | | | | | |
| Corn - - - - - | 2,315,554 | 3,031,081 | 3,279,403 | 3,192,491 | 2,964,639 | 3,182,870 |
| Oats - - - - - | 1,045,329 | 1,322,593 | 1,260,127 | 1,209,458 | 1,499,579 | 1,636,030 |
| Barley - - - - - | 238,622 | 278,459 | 226,014 | 242,544 | 370,126 | 386,551 |
| Sorghums - - - - - | 55,664 | 153,275 | 83,024 | 109,353 | 204,087 | 226,599 |
| | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> | <u>Tons</u> |
| Total feed grains | 88,846 | 117,006 | 119,734 | 117,624 | 121,601 | 130,900 |
| Hay - - - - - | 84,267 | 100,454 | 104,345 | 105,530 | 104,380 | 109,908 |

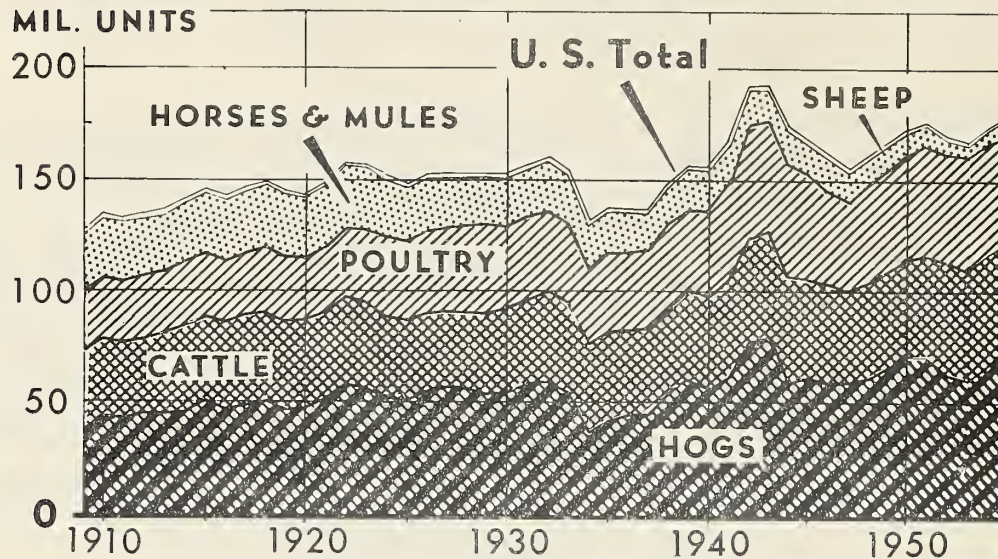
^{1/} 1955 acreage indicated in July; yield and production, in November.

Acresages of corn might differ somewhat from an 80-82 million average in individual years, even with the present type of program. However, acreage allotments on corn in the commercial area in 1954 and 1955 did not result in much reduction in corn acreage. Even with lower allotments and higher participation, the United States acreage would usually be close to 80-82 million.

With average weather, a continuation of the upward trend in corn yields seems likely. A yield of around 40 bushels per planted acre by 1960, compared with a 37.8 bushel average for 1951-55, appears to be a reasonable expectation. This would require an average annual increase of about one-third of a bushel per acre, compared with an annual increase of nearly twice that amount during the last 20 to 25 years. Greater use of earlier maturing hybrids in areas with short growing seasons, reduced losses from insect and disease damage, increased use of irrigation in the humid areas, and higher planting rates per acre combined with still greater and more effective use of fertilizer should continue the upward trend in corn yields. Despite the marked increase in the use of fertilizer on corn, Census reports indicate, for example, that fertilizer was used on less than one-half the corn acreage in Iowa in 1954. And the average rate of application was substantially less than half the rate which would have been most profitable.



GRAIN-CONSUMING LIVESTOCK*



YEAR BEGINNING OCTOBER 1

DATA FOR 1955 ARE PRELIMINARY

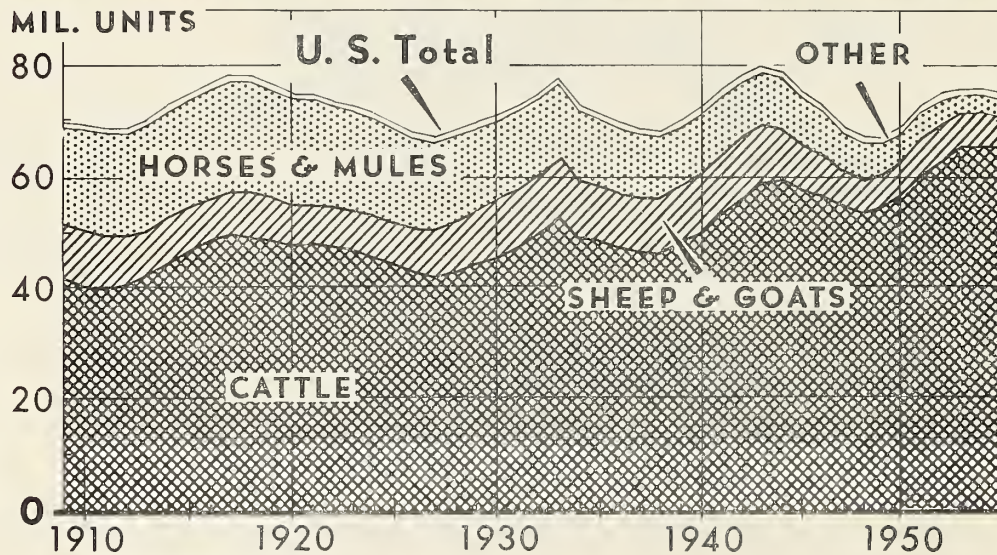
GRAIN AND OTHER CONCENTRATES CONSUMED BY ONE MILK COW IN A YEAR EQUALS ONE UNIT

*NUMBER OF UNITS FED

U. S. DEPARTMENT OF AGRICULTURE

NEG. 288-55 (11) AGRICULTURAL MARKETING SERVICE

ROUGHAGE-CONSUMING LIVESTOCK*



YEAR BEGINNING OCTOBER 1

HAY, PASTURE AND OTHER ROUGHAGE CONSUMED BY ONE MILK COW IN A YEAR EQUALS ONE UNIT.

* NUMBER OF UNITS FED. DATA FOR 1955 ARE PRELIMINARY.

U. S. DEPARTMENT OF AGRICULTURE

NEG. 287-55 (11) AGRICULTURAL MARKETING SERVICE

Opportunities for greater use of hybrid and early maturing varieties of grain sorghums give promise of higher yields for that crop. Yields of oats and barley have increased only one- or two-tenths of a bushel annually during the last 20 to 25 years and changes during the next 3 to 7 years are unlikely to be sufficient to add to total feed production materially. Should the corn yield achieve a level of 40 bushels per planted acre and the yield of the other feed grains continue at the 1951-55 level, and should the acreage of the various feed grains continue at the level of 1954 and 1955, about 128-130 million tons of feed grains would be produced annually. But should the acreage of feed grains other than corn revert to the preallotment level of 1952 and 1953, annual feed grain production would be about 122 million tons. As a reasonable compromise, a figure nearer 130 than 122 million tons has been assumed for the estimates that follow (table 4).

Such a supply of feed would support, at average feed consumption rates, around 190 million grain-consuming animal units.^{4/} This would be 7 percent more than those for 1955-56. Production of livestock products would be up a little more, as production rates per animal unit are increasing (table 5).

Under specifications of the present program, lower price supports on corn would be called for over the next few years. Beginning with 1956 the parity price of corn, on which supports are based, will be transitional and will be reduced 5 percent each year until the modernized parity is reached. In mid-September 1955 the effective parity by the old formula was \$1.81 per bushel and modernized parity was \$1.60, 12 percent less. According to these figures it will take 3 years to adjust to modernized parity. Under the present law, support as a percentage of parity can be as high as 90 percent or as low as 75 percent (to complying farms in the commercial area). Minimum support for the 1956 crop of corn, in view of a large supply including big carryover stocks, would be around 83 percent of parity. Computed on the October 1955 parity reduced 5 percent, this is equivalent to about 15 cents less per bushel than the \$1.58 support rate for the 1955 crop. Maximum support at 90 percent would be around \$1.55.

Prices of feed grains other than corn are supported in 1955-56 at 70 percent of parity. Present legislation grants discretionary authority for support of these grains at any level up to 90 percent of parity.

Present legislation for support prices could be revised. Certainly no precise projections of prices of feed grains to 1958-62 can be made. Assuming continued high levels of feed production, it appears probable that prices will be somewhat below their average of the last 5 years. The large carryover of grain now on hand would itself seem to militate against very high prices. Changing from the old to the modern parity for corn would tend to reduce support prices. This would be true even should the support rate in terms of parity be elevated somewhat.

^{4/} Revised upward from previous projection in the Livestock and Meat Situation for Nov. 14, 1955, page 40.

Table 4.- Feed concentrate balance, number of animal units, and feed per unit, United States, averages 1935-51, annual 1952-55 and projected average 1958-62

| Item | Year beginning October | | | | | | |
|---|------------------------|-------|-------|-------|-------|-------|--------------------|
| | Average | | | | | | |
| | 1935- | 1947- | 1952 | 1953 | 1954 | 1955 | Projected |
| | 39 | 51 | | | 1/ | 2/ | average 1958-62 |
| | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. |
| | tons | tons | tons | tons | tons | tons | tons |
| Supply: | | | | | | | |
| Stocks beginning of year 3/ | 10.7 | 22.3 | 20.2 | 27.0 | 31.8 | 38.9 | 4/ |
| Feed grain production | 88.8 | 117.0 | 119.7 | 117.6 | 121.6 | 130.9 | 128 |
| Other grains fed 5/ | 4.7 | 4.4 | 5.5 | 4.8 | 3.3 | 3.4 | 4 |
| Byproduct feeds fed | 14.4 | 20.8 | 22.6 | 23.2 | 23.0 | 23.4 | 24 |
| Total supply | 118.6 | 164.5 | 168.0 | 172.6 | 179.7 | 196.6 | 4/ |
| Utilization: | | | | | | | |
| Total concentrates fed 6/ | 93.5 | 123.8 | 122.8 | 125.9 | 124.3 | 134.0 | 140 |
| Feed grains for seed, human: food, industry and export | 11.2 | 17.2 | 17.0 | 16.2 | 18.5 | 19.0 | 18 |
| Total utilization | 104.7 | 141.0 | 139.8 | 142.1 | 142.7 | 153.0 | 158 |
| Utilization adj. to crop year basis | 104.1 | 141.0 | 141.0 | 140.8 | 140.8 | 153.6 | 158 |
| Stocks at end of crop year | 14.5 | 23.5 | 27.0 | 31.8 | 38.9 | 43.0 | 4/ |
| | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. | Mil. |
| Number of grain-consuming animal units fed annually 7/ | | | | | | | |
| | 143.7 | 165.3 | 169.4 | 168.4 | 174.0 | 178 | 190 |
| | Tons | Tons | Tons | Tons | Tons | Tons | Tons |
| Supply per animal unit | .83 | 1.00 | .99 | 1.02 | 1.03 | 1.10 | 4/ |
| Concentrates fed per animal unit | .65 | .75 | .72 | .75 | .71 | 8/.75 | .74 |

1/ Preliminary. 2/ Preliminary estimates based on indications in November 1955.
3/ Stocks in all positions. Corn and sorghum grain on October 1; oats and barley,
July 1. 4/ No projection made for stocks. 5/ Domestic wheat and rye and imported
grains. 6/ Total quantities fed in the U. S., including domestically produced and
imported grains and byproduct feeds. 7/ Grain and other concentrates consumed by
one milk cow in a year equals one unit. 8/ Assumes a rate of feeding per animal
unit about the same as the 1949-53 average.

Relative Increases in Demand for Beef and Pork

While not keeping up fully with rising consumer incomes, demand for all meat is expected to increase substantially in future years. It will support an expanding meat production.

Demand for beef will likely increase more than that for pork, continuing a long trend. The percent of consumers' incomes spent for pork has declined the last 40 years, while that for beef has been stable or has increased slightly. Part of the weakness in demand for pork is accounted for by a growing distaste among consumers for the fatter cuts of pork. Insofar as the type of hogs produced and methods of merchandising pork in future years are transformed to fit buyer tastes, the relative loss in demand for pork will be retarded. Nevertheless, beef will receive the greater benefit from the prospective increases in consumer income and demand for meat.

Prospective Production of Hogs

Production of hogs is always more quickly responsive to economic conditions than is production of cattle, because hogs can be raised to maturity in much the shorter time. Estimates of production of hogs and output of pork in 1958-62 are averages for the period. Annual fluctuations about the level would doubtless occur.

Under influence of three basic factors for 1958-62 -- higher incomes per person; fairly large supplies of feed, at lower prices than in the early 1950's; and possibly a smaller output of beef per person -- production of hogs and pork will likely trend upward about as fast as the population grows. Pork does not stand high enough in the structure of consumer demand for consumption rates per person to return to the highest levels of former years. Nevertheless, United States agriculture is so well suited to producing hogs that a gradually expanding hog industry seems likely. Nor will hogs be a continuously depressed industry. The price weakness of late 1955, though indicative that the profitable volume of production has definite limits, is somewhat misleading in its long-run implications. Average returns from hog production in future years will be reasonably satisfactory to producers. This will be especially true if the industry can make progress toward its major goals, those not only of tailoring its product with more regard to consumer demand, but also of achieving greater stability in production so that severe short-run supply and price variations are made smoother.

Projections for 1958-62 are for an annual pig crop of around 105 to 108 million. Annual slaughter would be 90 to 93 million. These compare with the 101 million pigs saved and $80\frac{1}{2}$ million hogs slaughtered in 1955. The supply of pork for consumption per person would be approximately 68 pounds. This would be little different from the 66 pounds consumed in 1955, the 67 pounds in prospect for 1956, or the 1945-54 average of $67\frac{1}{2}$ pounds.

Prices of hogs would likely be higher than the low prices in the fall of 1955 but perhaps no higher than prices in the same period of 1954. The hog-corn ratio would be at least equal to its longtime average.

Table 5.- Selected series related to feed grains, meat animals and meat consumption, averages 1935-51, annual 1952-55, and projected average 1958-62

| Item | Unit | Average | | 1952 | 1953 | 1954 | 1955 1/ | Projected average 1958-62 2/ |
|--|-----------|-------------|-------------|--------|--------|--------|------------|------------------------------------|
| | | 1935- 39 | 1947- 51 | | | | | |
| Feed grains: 3/ | | | | | | | | |
| Production - - - - - | Mil. tons | 88.8 | 117.0 | 119.7 | 117.6 | 121.6 | 130.9 | 128 |
| Fed to livestock - - - | Mil. tons | 74.7 | 99.3 | 96.6 | 99.8 | 98.7 | 108.0 | 112 |
| Used for food, industry, seed and export - - - - - | Mil. tons | 11.2 | 17.2 | 17.0 | 16.2 | 18.5 | 19.0 | 18 |
| All concentrates: | | | | | | | | |
| Used for livestock feed - - - - - | Mil. tons | 94.2 | 123.8 | 122.8 | 125.9 | 124.2 | 134.0 | 140 |
| Fed per unit of live- stock production - - | Ton | .67 | .72 | .69 | .71 | .67 | .71 | .70 |
| Fed per animal unit - | Ton | .66 | .75 | .72 | .75 | .71 | .75 | .74 |
| Livestock: | | | | | | | | |
| Production units 4/ - | Mil. | 140.2 | 172.8 | 177.4 | 177.2 | 185.0 | 189 | 205 |
| Animal units 5/ - - - | Mil. | 143.7 | 165.3 | 169.4 | 168.4 | 174.0 | 178 | 190 |
| Meat animals | | | | | | | | |
| Cattle and calves on farms, Jan. 1 - | Mil. head | 66.8 | 78.9 | 87.8 | 93.6 | 94.8 | 95.4 | 96-98 |
| Sheep and lambs on farms, Jan. 1 - - | Mil. head | 51.2 | 32.6 | 32.1 | 31.9 | 31.2 | 30.9 | 33-35 |
| Pig crop 6/ - - - | Mil. head | 68.6 | 91.9 | 91.2 | 81.5 | 92.4 | 7/101.0 | 105-108 |
| Slaughter | | | | | | | | |
| Cattle and calves - | Mil. head | 24.8 | 30.6 | 28.1 | 36.8 | 39.3 | 40.0 | 38-39 |
| Sheep and lambs - - | Mil. head | 21.8 | 14.9 | 14.3 | 16.3 | 16.2 | 16.6 | 16.5-17.0 |
| Hogs - - - - - | Mil. head | 56.8 | 76.9 | 86.7 | 74.3 | 72.1 | 80.4 | 90-93 |
| Meat production (dressed weight) | | | | | | | | |
| Beef and veal - - - | Mil. lb. | 7,975 | 10,796 | 10,840 | 13,989 | 14,647 | 15,225 | 14,750- 15,250 |
| Lamb and mutton - - | Mil. lb. | 870 | 653 | 648 | 728 | 734 | 750 | 750-775 |
| Pork, excl. lard - - | Mil. lb. | 7,337 | 10,608 | 11,547 | 10,063 | 9,952 | 10,900 | 12,250 |
| Total - - - - - | Mil. lb. | 16,182 | 22,057 | 23,035 | 24,780 | 25,333 | 26,875 | 27,750- 28,250 |
| Meat consumption per person | | | | | | | | |
| Beef - - - - - | Lb. | 54.8 | 62.4 | 61.5 | 76.8 | 79.2 | 81.0 | 72-74 |
| Veal - - - - - | Lb. | 8.1 | 8.6 | 7.1 | 9.5 | 9.9 | 9.6 | 9.0-9.5 |
| Lamb and mutton - - | Lb. | 6.7 | 4.3 | 4.1 | 4.6 | 4.5 | 4.5 | 4-4.5 |
| Pork, excl. lard - - | Lb. | 55.7 | 68.3 | 71.6 | 62.9 | 59.7 | 66.0 | 68 |
| Total - - - - - | Lb. | 125.3 | 143.6 | 144.3 | 153.7 | 153.3 | 161 | 154-156 |

- 1/ Preliminary estimates based on prospects in November 1955.
2/ Projections under assumptions shown in tables 1 and 4 and conditions described in the text.
3/ Summary items from table 4.
4/ A unit of livestock production is the production of an average milkcow or the equivalent production of meat, eggs, etc., from the same quantity of concentrates.
5/ See footnote 7, table 4.
6/ 12-months beginning Dec. 1 previous year.
7/ 1955 fall crop based on June intentions.

Cattle Production for 1958-62

Increasing consumer demand for beef would encourage a large production of cattle and of beef. However, production of beef, unlike pork, cannot be computed independently for the 1958-62 period but must be projected with regard for the probable trend of the cattle cycle.

The next few years may witness a slow decline in the number of cattle on farms and the number of calves produced each year. Slaughter of cows and heifers has increased sufficiently through 1955 to make such a decline probable. But unusually strong demand for beef and abundant feed will likely prevent as much decrease as has occurred in previous cycles. Under continued favorable conditions, numbers would touch a low point within a few years, then turn upward again. 5/

If they should follow this course, cattle numbers would pass their 1955 mark of 95 million by the latter part of the 1958-62 period, and then push on toward a new high. 6/

Since cattle and calves are considered to be in an expansion phase in much of 1958-62, the slaughter rate would be restricted by the withholding from slaughter that would be necessary. Not until late in the period would the 1955 output of 13.6 billion pounds of beef be repeated.

Consumption of beef in 1958-62 is estimated at 74 pounds per person. This is an average for the 5 years; it would be less in the first years, and greater later. A 74-pound rate would be 7 pounds below the peak 81 pounds consumed in 1955. However, it would be higher than in any year of record prior to 1953.

Thus even though beef supplies and consumption rate are expected to decrease somewhat the next few years, they will continue high in comparison with any period except the big-supply years of 1953 to 1955.

Prices of beef and of cattle, under the conditions described, would be higher in 1958-62 than in the last few years. They would not be as high as in the boom years of 1950-52. A reasonable estimate is that they would approximate their level in the years just after the war, 1946-49.

5/ Projections of cattle numbers and slaughter will be presented in the Livestock and Meat Situation for May, 1956.

6/ An analysis of probable trends in cattle numbers is presented in "How Many Cattle by 1965." Monthly Review, Federal Reserve Bank of Kansas City, September 1955.

Outlook for Sheep and Lambs

Production of sheep and lambs is expected to increase by 1958-62 and to average larger than in the past few years. However, the expansion will not be extremely great. Output of lamb and mutton per consumer will likely remain at about $4\frac{1}{2}$ pounds, the highest rate of the last several years.

Sheep and lamb numbers apparently are being reduced during 1955 for the fourth year in succession. Annual lamb crops and annual output of lamb and mutton have been more stable, because the percentage lamb crop (lambs saved per 100 ewes) has increased. Current trends in sheep numbers are a net result of two opposing tendencies -- reductions in numbers in range flocks, and increases in farm flocks in both West and East.

The downtrend in range flocks probably will ease off. Since numbers in farm flocks probably will continue upward, total sheep numbers will likely end their decline and begin to increase sometime in the next few years. The total expansion by 1958-62 is expected to be moderate because production in farm flocks, a supplementary enterprise, is unlikely to regain its onetime size.

Prices of sheep and lambs may increase gradually in the period ahead, chiefly because supplies of beef are expected to decrease and cattle prices to be higher. Sheep and lamb prices also will return only partway toward their highest levels of a few years ago.

